

Joint Institute for Nuclear Research

**XXIII INTERNATIONAL COLLOQUIUM
ON GROUP THEORETICAL METHODS
IN PHYSICS**

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**The Opening Address by Professor
A.N. Sissakian**

*Chairman of the Organizing Committee,
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Dear colleagues! Dear guests!

On behalf of the Conference Organizers and the Directorate of the Joint Institute for Nuclear Research it is my honor and pleasure to welcome you to the XXIIIth International Conference on Group Theoretical Methods in Physics which will be held in Dubna from July 31 to August 05.

The Colloquium on the Group Theoretical Methods in Physics is one of the traditional and prestige conference series covering the most important topics of symmetry which are relevant to the intersection of present-day mathematics and physics.

Let me remind you that the group colloquium up to now was organized only once in Russia and I believe that the choice of place for Group23 is not accidental. First of all Dubna has the great traditions a specially in field of theoretical and mathematical physics, traditions, connected with names of such outstanding scientists as Nicolai Bogolyubov, Dmitry Blokhintsev, Moisey Markov and his colleagues. For more than 40 years, our Institute has accumulated much experience in organizing scientific schools and conferences on particle and nuclear physics. Together with these conferences, traditional for our Institute, we have, starting with 1973, organized every second year an international Conference on Symmetry Methods which includes some topics of the Colloquium and many of you participated in it. I am pleased to remind you that the first organizer of this series of conferences was professor Jacob Smorodinsky a brilliant person and outstanding scientist.

The role of group theory, starting with its first applications to quantum mechanics, is increasing. At present, symmetry methods penetrated into all fields of modern physics.

One of the directions where symmetries play an essential role is the theory of classical and quantum integrable systems.

By means of group methods our notion of integrable models has greatly increased and now we realize the key role of symmetry approaches in classifying and solving intergrable models in the field theory, statistical physics, quantum mechanics and quantum gravity.

In the last decades the group theory itself has intensively been developing too. A good example is the discovery of new types of symmetries described by quadratic algebras, quantum groups and W -algebras.

Therefore, following the experience of organizing the XXI Group Colloquium in Goslar, we have chosen to make mini symposia on the theory of intergrable systems, quantum groups and path integrals.

In this regard I would like to give special mention to the co-organizers of these symposia Akira Inomata, Pavel Winternitz and Vladimir Dobrev for their invaluable contribution. Taking this opportunity I would like to thank all the members of Advisory Committee

for their help with the programme. In particular, I would like to thank Professor H.-D. Doebner the chairman of the Standing Committee of the Colloquium for his interest and constant support of this Conference.

I am sure that the organization of a conference such as this on the territory of Russia in spite of the current difficulties, will nevertheless promote closer international ties with the research centers of the JINR Member States and other countries the representatives of which are among the participants of this scientific forum.

Finally, I wish to thank the sponsors that have made this meeting possible: UNESCO, IUPAP, INTAS and Russian Foundation for Basic Research and also the Heisenberg-Landau and Infeld-Bogolyubov programs.

You are welcome, dear participants. Thank you.